the travel of the platen to produce straight holes, A practical way to determine parallelism Is to damp a piece of round stock in the headstock chuck, letting It project from the jaws a little farther than the length of the holes lo be ground. This piece should have a groove turned in it for the wheel to dwell in during reversal This test piece is then ground in the regular way with the wheel used for cylindrical work, the headstock being adjusted by means of its swivel bast* until the test piece is ground parallel Before calipering, the wheel should be allowed to grind until very few sparks are visible. When once this test piece has been ground straight the setting can be depended upon to produce straight holes, provided, of course, that the swivel adjustment of the headstock and the angular adjustment of the platen are not disturbed. To try to align the headstock by caliperlng the work while the internal grinding is in process is, at best, difficult, and the operator is never sure of accurate results.

It is common practice to true wheels for Internal grinding with a diamond fed by hand, using the eye as a guide. This is poor practice, as the wheel is seldom turned parallel, one edge being left to do all the cutting, which glaxes it readily* A more practical way to true these comparatively soft wheels is • to feed them past the end of a carborundum rub, in 20 grit, li grade. The rub can be held in a suitable holder strapped to the platen of the grinder or held firmly by hand against the end of the work. A carborundum rub shows high efficiency when used for this purpose.

In holding work in the chuck for internal grinding, it is well to exercise due care to see that the work is not clamped hard enough to spring it out of shape. As a rule it does not require much pressure to hold work of this nature, as the grinding cut is comparatively light. As It is general practice to grind internal work dry, a certain amount of expansion from frictional heat is always present. For this reason considerable care has to be used in calipering the work with the sizing plug. As the plug is many degrees cooler than the work, it is liable, on being inserted, to contract the bushing suddenly, causing bushing and plug to